The listing of claims will replace all prior versions, and listings, of claims in the application.

*Amendment, cancellation or withdrawal of claims are based solely on the claims as filed in applicants' Response dated February 3, 2006 which was filed after the receipt of a Notice of Non-Compliant Amended dated January 12, 2006. The Office Action of April 4, 2006 indicated that it is responsive to applicants' communication of February 3, 2006. **Reinstatement** of any claims is a result the Office Action of April 4, 2006 as commented below in the **Remarks Section** of this paper.*

Listing of Claims:

1. **(currently amended)** A method for depositing a doped glass layer on a surface of a substrate comprising the step of:

reacting a precursor compound of the formula $(R_3SiO)_jM(OR')_k$ to deposit a doped glass layer suitable for photonic devices on the surface of the substrate;

wherein M is Ti or Zr; ~~R~~ R is an alkyl moiety; R′ is an alkyl moiety; j is 1, 2, 3 or 4; and k=4-j, and

wherein said doped glass layer on the substrate has a Si:M ratio of 1:1, 2:1, 3:1 or 4:1 depending on the value of j; and

wherein R is selected from the group consisting of methyl, ethyl and propyl; and R′ is selected from the group consisting of methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *t*-butyl and *s*-butyl.

2. (cancelled)

3. (cancelled)

4. (previously presented) The method of claim 1, wherein the doped glass layer is deposited using a CVD process.

5. (withdrawn) The method of claim 4 wherein the CVD process is an inside vapor deposition process or an outside vapor deposition process.

6. (previously presented) The method of claim 1, wherein the reacting step is performed using a PECVD process.

7 - 8 (cancelled)

9. (withdrawn) The method of claim 1, wherein the doped glass layer is deposited using a flame hydrolysis deposition process.

10. (withdrawn) The method of claim 9 wherein the doped glass layer is deposited as a layer of doped glass soot particles, and wherein the method further comprises the step of consolidating the soot particles to a homogeneous doped glass film by heat treatment.

11. (withdrawn) The method of claim 1 wherein the precursor compound of the formula $(R_3SiO)_jM(OR')_k$ is mixed with a silica precursor before deposition of the doped glass layer; and when said silica precursor is admixed with the precursor $(R_3SiO)_jM(OR')_k$, the resulting glass product has a non-stoichiometric Si:M ratio relative to j, including a value greater than j.

12. (withdrawn) The method of claim 11, wherein the silica precursor is selected from the group consisting of tetraethoxysilane, silane, disilane, tetramethylsilane, trimethylsilane, dimethylsilane, methylsilane, tetraaminosilane, triaminosilane, diaminosilane, aminosilane, tetrakis(diethylamino)silane, octamethylcyclotetrasiloxane, tetramethylcyclotetrasiloxane and diacetoxydi-*s*-butoxysilane.

13. (previously amended) The method of claim 1, wherein the compound of formula $(R_3SiO)_jM(OR')_k$ is chosen from the group consisting of tetrakis(trimethylsiloxy)titanium, tetrakis(trimethylsiloxy)zirconium, tris(trimethylsiloxy)isopropoxytitanium, tris(trimethylsiloxy)isopropoxyzirconium, bis(trimethylsiloxy)diisopropoxytitanium, bis(trimethylsiloxy)diisopropoxyzirconium, (trimethylsiloxy)triisopropoxytitanium, and (trimethylsiloxy)triisopropoxyzirconium.

14-25 (cancelled)

26. **(Reinstated by Examiner per Office Action and Amended)** A method of making a planar waveguide comprising the steps of:

using a precursor compound of the formula $(R_3SiO)_jM(OR')_k$ to deposit a doped glass layer on the surface of a substrate, wherein M is Ti or Zr; R is an alkyl moiety; R' is an alkyl moiety; j is 1, 2, 3 or 4; and k=4-j; and

using standard photolithographic techniques to form the planar waveguide from the doped glass layer

wherein R is selected from the group consisting of methyl, ethyl and propyl; and R' is selected from the group consisting of methyl, ethyl, *n*-propyl, isopropyl, *n*-butyl, isobutyl, *t*-butyl and *s*-butyl.

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27. (withdrawn) A method of making an optical fiber comprising the steps of:

making an optical fiber preform by using a precursor compound of the formula $(R_3SiO)_jM(OR')_k$ to deposit a doped glass layer on the surface of a substrate, wherein M is Ti or Zr; R is an alkyl moiety; R' is an alkyl moiety; j is 1, 2, 3 or 4; and k=4-j; and

drawing the optical fiber preform into an optical fiber.

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28. (withdrawn) The method according to claim 26, wherein the precursor compound of the formula $(R_3SiO)_jM(OR')_k$ is mixed with a silica precursor before deposition of the doped glass layer; and when said silica precursor is admixed with the precursor $(R_3SiO)_jM(OR')_k$, the resulting glass product has a non-stoichiometric Si:M ratio relative to j, including a value greater than j.

29. (withdrawn) The method according to claim 27, wherein the precursor compound of the formula $(R_3SiO)_jM(OR')_k$ is mixed with a silica precursor before deposition of the doped glass layer; and when said silica precursor is admixed with the precursor $(R_3SiO)_jM(OR')_k$, the resulting glass product has a non-stoichiometric Si:M ratio relative to j, including a value greater than j.

30. (new) The method of claim 26, wherein the compound of formula $(R_3SiO)_iM(OR')_k$ is chosen from the group consisting of tetrakis(trimethylsiloxy)titanium, tetrakis(trimethylsiloxy)zirconium, tris(trimethylsiloxy)isopropoxytitanium, tris(trimethylsiloxy)isopropoxyzirconium, bis(trimethylsiloxy)diisopropoxytitanium, bis(trimethylsiloxy)diisopropoxyzirconium, (trimethylsiloxy)triisopropoxytitanium, and (trimethylsiloxy)triisopropoxyzirconium.